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EXAMINER

BHATNAGAR, ANAND P

ART UNIT

PAPER NUMBER

2623

DATE MAILED: 04/11/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/358,408

Applicant(s)

MANABU OHGA AND YOKOHAMA-SHI

Examiner

Anand Bhatnagar

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-21 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 7.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Claim Objections

1. Claim 13 is objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form. Claim 13 is dependent on claim 7 and is a duplicate limitation of claim 7.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this

Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) do not apply to the examination of this application as the application being examined was not (1) filed on or after November 29, 2000, or (2) voluntarily published under 35 U.S.C. 122(b). Therefore, this application is examined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

Claims 1,3,4, 7,8,10, 13,14,16, and 18 are rejected under 35 U.S.C. 102(e) as being anticipated by Katoh (U.S. patent 5,754,682).

Regarding claims 1,8, 14 and 16: Katoh discloses an image processing method comprising the steps of: obtaining a profile having a plurality of colorimetric data which depend on a plurality of light sources (fig. 6 blocks 3 and S2, col. 6 lines 37-41, and col. 3 lines 63-67, where the "profile" is the picture data);

inputting a viewing condition (fig. 6 L3, blocks S1 and 12, col. 3 lines 64-67, and col. 7 lines 2-5) ;

selecting colorimetric data from the plurality of colorimetric data in accordance with the input viewing condition (col. 3 lines 65-67 and col. 4 line 1-4, where the color index data for color appearance matching under the ambient light is taken as the selected colorimetric data with the input viewing condition); and

conjecturing colorimetric data corresponding to the input viewing condition based on the selected colorimetric data (fig. 11 blocks 12 and 50, col. 18 lines 38-51, where the parameters are set for the ambient light conditions).

Regarding claim 18: It is rejected for the same reasons as for claims 1,8,14, and 16 above. As for the limitation in claim 18, about a computer program product comprising a computer readable medium, is further disclosed by Katoh (fig. 5 number 5 and col. 18 lines 53-55, this process is done by a computer and a computer contains instructions on how to carry out the steps of the disclosed invention).

Regarding claims 7 and 13: The method according to claim 1, wherein the conjectured colorimetric data is cached to the profile in correspondence with the input viewing condition (col. 18 lines 65-67, fig. 11 block 50). It is rejected for the same reason as for claims 2,9,15,17,19, and 21.

Regarding claim 3: further comprising the step of generating conversion data for color matching based on the conjectured colorimetric data (fig. 11 blocks 12, 14, and 50, col. 18 lines 38-51, where the parameters are set for the ambient light conditions and conversion parameters are set for the output device).

Regarding claims 4 and 10: wherein said selecting step selects colorimetric data by comparing a chromaticity of a light source designated by the input viewing condition with chromaticities of the plurality of light sources of the colorimetric data (col. 4 lines 20-25, col. 6 lines 48-54, col. 18 lines 55-67, and col. 19 lines 1-11).

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 5 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Katoh (U.S. patent 5,754,682) in view of Shiraiwa et al. (U.S. patent 6,201,893).

Regarding claims 5 and 11: wherein said selecting step selects colorimetric data by comparing a color temperature of a light source designated by the input viewing condition with color temperatures of the plurality of light sources of the colorimetric data.

Katoh discloses a system whereby a color image from an input device and the ambient environment light conditions (i.e. luminance and chromaticity) are taken in combination to create colorimetric conversion data for an output device to have the color appearance of a hard copy appear the same as the soft copy (fig. 6 number 3, L3, S1, S2, 11, 12, 14, 15, and 4, col. 3 lines 62-67 and col. 4 lines 1-10). Katoh does not disclose to use color temperature as a factor to calculate colorimetric data for color appearance conversion from a soft copy to a hard copy. Shiraiwa et al. teaches to use color temperature to create color appearance conversion data (Shiraiwa et al.; col. 5 lines 22-35). It would have been obvious to one skilled in the art to combine the teaching of Shiraiwa et al. to that of Katoh because they are analogous in color image reproduction processing by incorporating environmental conditions. One skilled in the art would have been motivated to incorporate the color temperature determination of Shiraiwa et al. to that of Katoh for improved color appearance in order to compensate for the

changes in color reproduction, due to temperature changes, to give a image being reproduced with high color precision.

4. Claims 2,9,15,17,and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Katoh (U.S. patent 5,754,682).

Regarding claims 2,9,15,17, and 19: further comprising the step of caching the conjectured colorimetric data to the profile (col. 18 lines 65-67, fig. 11 block 50). It is obvious that the newly created colorimetric data needs to be stored in memory. The memory can be somewhere in the CPU or the memory of the profile device can be configured to store the created colorimetric parameters. It would make the apparatus more cost effective if the profile device memory was configured to store the newly created parameters.

5. Claims 6, 12, 20, and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Katoh (U.S. patent 5,754,682) in view of Daniels et al. (U.S. patent 6,046,723).

Regarding claims 6 and 12: wherein said conjecturing step conjectures colorimetric data corresponding to the input viewing condition by using a color appearance model.

Katoh discloses a system whereby a color image from an input device and the ambient environment light conditions (i.e. luminance and chromaticity) are taken in combination to create colorimetric conversion data for an output device

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to have the color appearance of a hard copy appear the same as the soft copy (fig. 6 number 3, L3, S1, S2, 11, 12, 14, 15, and 4, col. 3 lines 62-67 and col. 4 lines 1-10). Katoh does not disclose to use a color appearance model to perform color reproduction on a soft color copy image. Daniels et al. teaches that using a color appearance model to perform color reproduction is conventional for the different surroundings (Daniels et al. col. 1 lines 43-50). It would have been obvious for one skilled in the art to combine the teaching of Daniels et al. to that of Katoh because they are analogous in color reproduction using image environmental surroundings. One would have been motivated to incorporate the color reproduction method of Daniels et al. into the device of Katoh to compensate for the an observer's perceived lightness contrast changes due to the environment lighting conditions (Daniels et al. col. 1 lines 46-50).

Regarding claim 20: It is rejected for the combination reasons of claim 1, 8, 14, 16, and 18 rejection with the reasons of claim 6 and 12 rejection.

Regarding claim 21: It is rejected for the same reasons as for claim 2, 9, 15, and 17.

Regarding claims 20 and 21: As for the limitation in claims 20 and 21 , about a computer program product comprising a computer readable medium, is further disclosed by Katoh (fig. 5 number 5 and col. 18 lines 53-55, this process is done by a computer and a computer obviously contains instructions on how to carry out the steps of the disclosed invention).

Conclusion

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Smilansky et al. (U.S. patent 5,339,176) for color calibration.

Matsunawa et al. (U.S. patent 5,357,354) for a color code generator.

Kita et al. (U.S. patent 5,636,290) for color image processing using chrominance.

Vigneau et al. (U.S. patent 6,008,907) for printer calibration by testing a color test pattern.

Kita et al. (U.S. patent 5,502,579) for color adjustment.

Collette (U.S. patent 5,081,529) for color and tone scale calibration.

Ring et al. (U.S. patent 5,754,184) for color management system across devices.

Hidaka (U.S. patent 6,344,900) for color matching for different lighting conditions.

Hidaka (U.S. patent) for color conversion parameters.

Nakauchi et al. (U.S. patent 6,198,843) for color appearance model.

Hino (U.S. patent 5,956,015) for color appearance model.

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6. Any inquiry into this communication should be directed to Anand Bhatnagar whose telephone number is 703-306-5914, whose supervisor is Amelia Au whose number is 703-308-6604, group receptionist is 703-305-4700, and group fax is 703-872-9314.

AB

Anand Bhatnagar

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April 8, 2002

JOSEPH MANCUSO
PRIMARY EXAMINEE